TESLA — TeV Energy Superconducting Linear Accelerator

TTF BEAM DUMP

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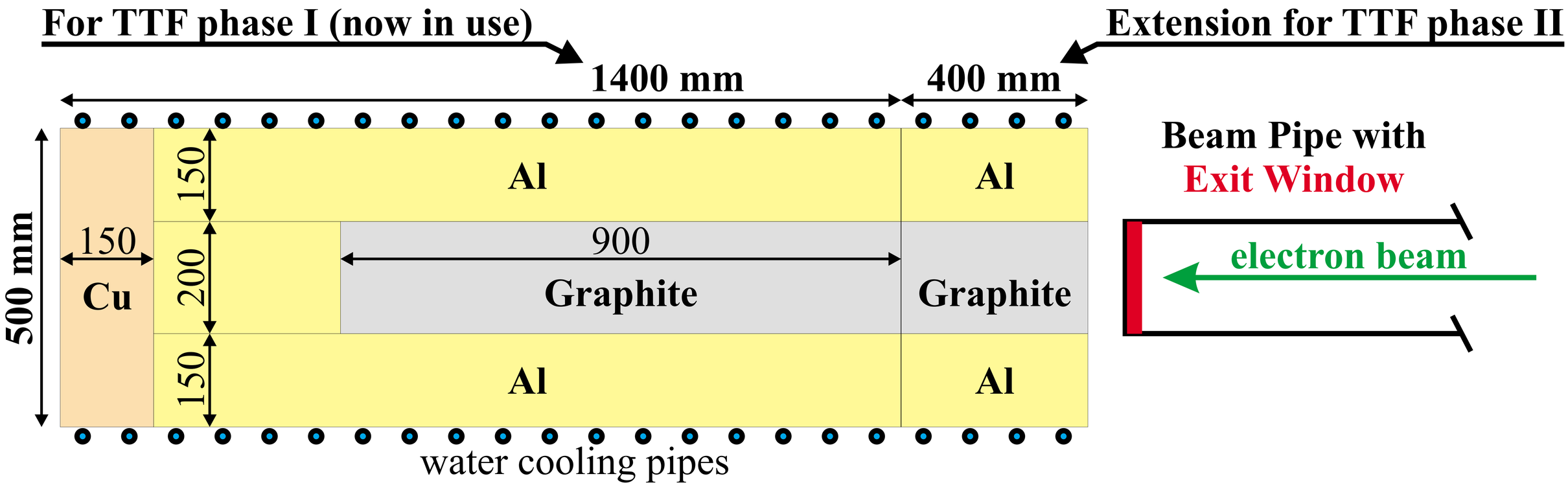
Capability of Beam Dumps :

	TTF Phase I	**TTF Phase II**
max. beam energy	800 MeV	2 GeV
max. average power	50 kW	130 kW
max. energy in one macropulse	5 kJ	13 kJ
energy leakage from dump	< 1%	< 1%

Schematic Overview

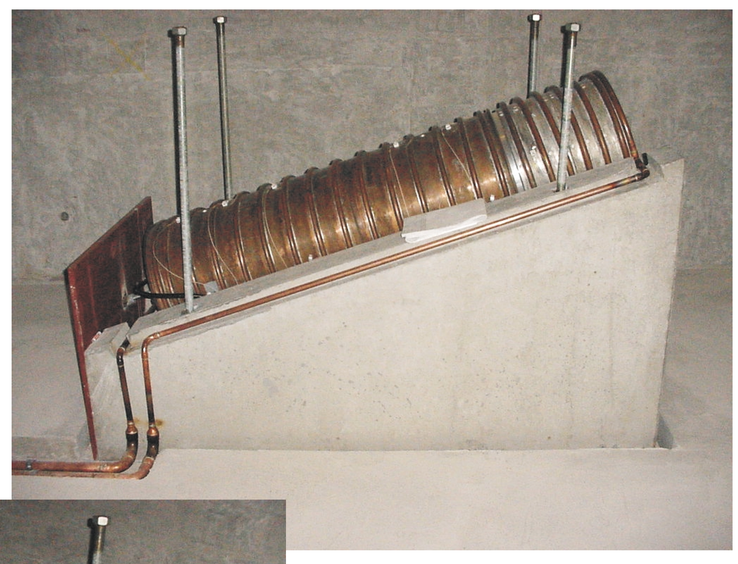


Beam Dump at TTF phase I

- solid cylindrical absorber with graphite core and circumferential water cooling

Beam Dump for TTF phase II

- 400mm extension to handle higher energy
- slow beam sweep to handle higher power



Exit Window at TTF phase I

- 1mm thick CuCoBe alloy, (0.48% Co, 0.3% Be)
- 125mm in diameter

Exit Window for TTF phase II

- improved capability to withstand cyclic mechanical stress
- graphite-titanium-graphite sandwich structure